

Some secretion characteristics of bacterial ribonuclease

Sharipova M., Lopukhov L., Vershinina O., Leshchinskaya I.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The investigation of the effect of some components of the medium on the distribution of the secretory guanyl-specific ribonuclease of *Bacillus intermedius* (EC 3.1.4.23) among various cell fractions and culture liquid showed that the amount of this enzyme in the culture liquid does not depend on the concentration of calcium ions in the medium (within 1-5 mM). The study of the effect of the amino acid substitutions Trp34Asn and Trp70Asn in the ribonuclease molecule showed that the secretion of ribonuclease depends on the formation rate of its secondary structure. The amino acid substitution Trp34Asn completely inhibits ribonuclease secretion. © 2005 Pleiades Publishing, Inc.

<http://dx.doi.org/10.1007/s11021-005-0024-9>

Keywords

Bacillus intermedius, Guanyl-specific ribonuclease, Immunoblotting, Localization, Recombinant strains, Secretion